

**ABSTRACT**

The invention employs an unlabeled signal primer comprising a 5' adapter sequence for detection of nucleic acid target sequences. The detection system further comprises a reporter probe, the 3' end of which hybridizes to the complement of the 5' adapter sequence of the signal primer to produce a 5' overhang. Polymerase is used to fill in the overhang and synthesize the complement of the 5' overhang of the reporter probe. Synthesis of the reporter probe complement is detected, either directly or indirectly, as an indication of the presence of the target.